# Digital Object Identifiers (DOIs)

## 1. Overview

A DOI consists of a two part alphanumeric string separated by a forward slash and serves as a persistent unique identifier of objects of any type.

The DOI name is case insensitive with the syntax *doi:[prefix]/[suffix]*. Once assigned, the DOI name shall not be changed.

The prefix consists of a directory indicator and the registrant code separated by a period. The directory indicator distinguishes the entire set of character strings (prefix and suffix) as digital object identifiers and shall be '10'. The registrant code following the period is a unique string assigned to a registrant.

The suffix is an alphanumeric string of any length that uniquely identifies the data item and is managed by the registrant.

It is the registrant's responsibility to provide metadata describing the object to which the DOI name is being assigned.

For more detailed information about the DOI System, refer to the DOI Handbook at http://www.doi.org/doi_handbook.

## 2. Roles and Responsibilities

### a. EOSDIS

The Earth System Data Information System (ESDIS) has embarked on a pilot project to create Digital Object Identifiers (DOI$^{©}$) for EOSDIS products. ESDIS, which manages the EOSDIS data centers, is a registrant and is assigned the number '5067'. DOIs will enable and encourage consistent citation of EOSDIS datasets in scientific publications. Therefore all EOSDIS data sets will include the prefix 10.5067.

ESDIS identified models to be used as suffices:
[mission]/[instrument]/data[m][n]
[campaign]/[platform] group]/data[m][n]
[campaign]/[measurement group]/data[n]
[program]/[measurement group]/data[n]
[measurement group]/data[n]

In the above example, [m] refers to processing level and ranges from 1 to 3 for satellite data and [n] refers to the iteration of the data type.

DOI values have now been reserved for SRB and NREL Solar. The reserved DOI values will be embedded in the file metadata as part of the data product generation. Once the products are available at the ASDC, ESDIS will register the DOI values, citation and location information in the DOI system. The ASDC will post the DOI and citation information along with access to the product at their web site.

A table of the Surface Radiation Budget Release 4.0 Baseline data set DOIs is included in Appendix A and a table of the National Renewable Energy Laboratory (NREL) Advanced Solar Mapping Project data set DOIs is included in Appendix B.

### b. ASDC
The ASDC will need to update the IMS database to accommodate the DOI. It is unclear if they will need to update ANGe as well. If SRB provides a DOI in the metadata and the ASDC is not prepared to handle it in their system/database, it will not break anything. ASDC would still ingest the data and make it available to users via the Order Tools. At a later date when they are ready, they will have to reingest the metadata.

Once the products are available at the ASDC and ESDIS has registered the DOI values, citation and location information in the DOI system, the ASDC will post the DOI and citation information along with access to the product at their web site.

### c. SRB/NREL Teams
The SRB and NREL DOI values have already been reserved. A list of the proposed data products needs to be created for each project and DOIs so they can be included in the metadata during product generation. Once the products have been produced and are available at the ASDC, ESDIS will register the DOI values, citation and location information in the DOI system.

3. **Metadata**
Existing metadata structures can accommodate the addition of EOSDIS product and file level identifies. The product data file will contain a file level attribute for the DOI. The global file-level attribute is required for the user convenience (e.g., viewing with standard exploratory tools.)

The associated EOSDIS core metadata and metadata files should also contain a Product Specific Attribute (PSA) for the DOI.

The tag or attribute name in the metadata will be 'identifier_product_doi'. The same name will be used for the both file-level and PSA constructs.

## Appendix A – SRB

DOIs for SRB products shall take the form:  doi:10.5067/srb/data[n].

| DOI | Product Title | URL |
|---|---|---|
| 10.5067/srb/data101 | SRB_REL4.0 _CLDPROPS_3HRLY | |
| 10.5067/srb/data102 | SRB_REL4.0_BASELINE_GSW_3HRLY | |
| | SRB_REL4.0_BASELINE_GSW_3HRLY_NC | |
| | SRB_REL4.0_BASELINE_GSW_3HRLY_MONTHLY | |
| | SRB_REL4.0_BASELINE_GSW_3HRLY_MONTHLY_NC | |
| | SRB_REL4.0_BASELINE_GSW_3HRLY_MONTHLY_LOCAL_NC | |
| | SRB_REL4.0_BASELINE_GSW_3HRLY_MONTHLY_UTC_NC | |
| | SRB_REL4.0_BASELINE_GSW_DAILY_LOCAL | |
| | SRB_REL4.0_BASELINE_GSW_DAILY_LOCAL_NC | |
| | SRB_REL4.0_BASELINE_GSW_DAILY_UTC | |
| | SRB_REL4.0_BASELINE_GSW_DAILY_UTC_NC | |
| | SRB_REL4.0_BASELINE_GSW_MONTHLY_LOCAL | |
| | SRB_REL4.0_BASELINE_GSW_MONTHLY_LOCAL_NC | |
| | SRB_REL4.0_BASELINE_GSW_MONTLY_UTC | |
| | SRB_REL4.0_BASELINE_GSW_MONTLY_UTC_NC | |
| | SRB_REL4.0_BASELINE_GLW_3HRLY | |
| | SRB_REL4.0_BASELINE_GLW_3HRLY_NC | |
| | SRB_REL4.0_BASELINE_GLW_3HRLY_MONTHLY | |
| | SRB_REL4.0_BASELINE_GLW_3HRLY_MONTHLY_NC | |
| | SRB_REL4.0_BASELINE_GLW_DAILY | |
| | SRB_REL4.0_BASELINE_GLW_DAILY_NC | |
| | SRB_REL4.0_BASELINE_GLW_MONTHLY | |
| | SRB_REL4.0_BASELINE_GLW_MONTHLY_NC | |
| | SRB_REL4.0_BASELINE_LPSA_DAILY | |
| | SRB_REL4.0_BASELINE_LPSA_DAILY_NC | |
| | SRB_REL4.0_BASELINE_LPSA_MONTHLY | |
| | SRB_REL4.0_BASELINE_LPSA_MONTHLY_NC | |
| | SRB_REL4.0_BASELINE_LPLA_DAILY | |
| | SRB_REL4.0_BASELINE_LPLA_DAILY_NC | |
| | SRB_REL4.0_BASELINE_LPLA_MONTHLY | |
| | SRB_REL4.0_BASELINE_LPLA_MONTHLY_NC | |
| | SRB_REL4.0_BASELINE_LPLA_3HRLY | |
| | SRB_REL4.0_BASELINE_LPLA_3HRLY_NC | |
| | SRB_REL4.0_BASELINE_LPLA_3HRLY_MONTHLY | |
| | SRB_REL4.0_BASELINE_LPLA_3HRLY_MONTHLY_NC | |
| | SRB_REL4.0_BASELINE_G4TskinOnly_GLW_3HRLY | |
| | SRB_REL4.0_BASELINE_G4TskinOnly_GLW_DAILY | |
| | SRB_REL4.0_BASELINE_G4TskinOnly_GLW_MONTHLY | |
| | SRB_REL4.0_BASELINE_G4TskinOnly_GLW_3HRLY_MONTHLY | |

## Appendix B - NREL Advanced Solar Mapping Project

DOIs for NREL products shall take the form:  doi:10.5067/nrelsolar/data[n].

| DOI | Product Title | URL |
|---|---|---|
| 10.5067/nrelsolar/data101 | | |
| 10.5067/nrelsolar/data102 | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |